

Intelligent Self Evolving Prognostic Fusion, Phase I

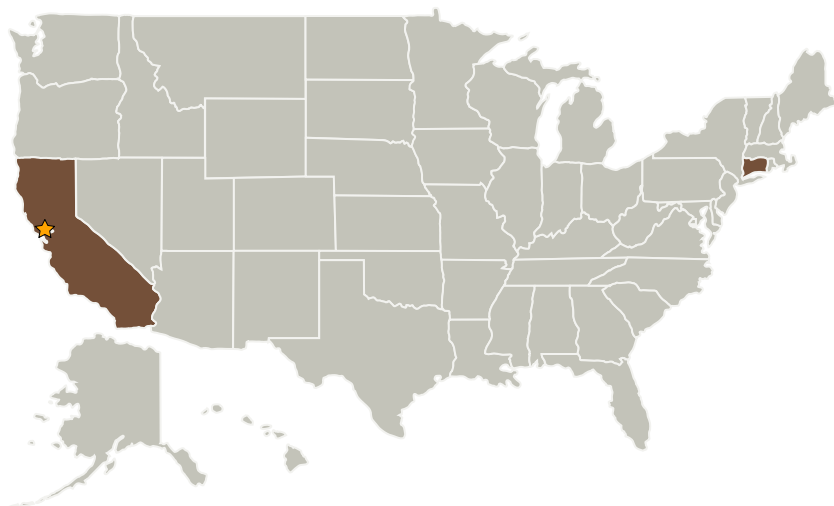
Completed Technology Project (2005 - 2006)



Project Introduction

In order to meet the challenges of space exploration, knowledge of the current and future health of mission critical systems is essential. Qualtech Systems, Inc. in cooperation with Montana Tech of the University of Montana proposes to develop an intelligent self evolving prognostic fusion solution. The proposed solution intelligently combines multiple subsystem health assessments to form an overall system health assessment. Additionally, the solution performs optimal system configuration based upon the health assessment. Design of the individual prognostic solutions for subsystem health assessment also utilizes fusion methods. The approach combines both model based and data driven techniques to provide optimal health assessment. The prognostic solution self evolves over time to cover the life of the subsystem.

Primary U.S. Work Locations and Key Partners



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Organizational Responsibility

Responsible Mission Directorate:

Space Technology Mission
Directorate (STMD)

Lead Center / Facility:

Ames Research Center (ARC)

Responsible Program:

Small Business Innovation
Research/Small Business Tech
Transfer

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Organizations Performing Work	Role	Type	Location
★Ames Research Center(ARC)	Lead Organization	NASA Center	Moffett Field, California
Qualtech Systems, Inc.	Supporting Organization	Industry Minority-Owned Business, Small Disadvantaged Business (SDB)	Rocky Hill, Connecticut

Primary U.S. Work Locations

California	Connecticut
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Project Management

Program Director:

Jason L Kessler

Program Manager:

Carlos Torrez

Principal Investigators:

William S Morrison

Richard J Black

Technology Areas

Primary:

- TX10 Autonomous Systems
 - └ TX10.2 Reasoning and Acting
 - └ TX10.2.5 Fault Diagnosis and Prognosis